

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for measuring the X-ray emission produced by an object ~~[[(11)]]~~ exposed to an electron beam, including ~~characterized in that it comprises at least:~~

~~[[-]]~~ a subassembly ~~[[(13)]]~~ ~~comprising~~ including electron emission means and an acceleration stage in which the electrons are subjected to a potential difference $\Delta V1$;

~~[[-]]~~ a space with no electric field ~~(15, 110, 114)~~ in which the electron beam is shaped and controlled by suitable means ~~(18, 19, 11, 116, 119)~~;

~~[[-]]~~ a deceleration phase in which the electrons are subjected to a potential difference $\Delta V2$ of the same sign as $\Delta V1$;

~~[[-]]~~ a support ~~(12)~~ for positioning the object ~~(11)~~ beneath the electron beam; and

~~[[-]]~~ spectral analysis means ~~(1113)~~ for analyzing the X-rays emitted by the object being analyzed.

2. (Currently Amended) The device as claimed in claim 1, wherein ~~characterized in that~~ the potential differences $\Delta V1$ and $\Delta V2$ are applied using two generators ~~(14 and 119)~~, the reference potentials of which are connected together, the first generator ~~(14)~~ raising the electron emission source to the potential HV1 and the second generator ~~(119)~~ raising the object to be analyzed ~~(11)~~ to the potential HV2.

3. (Currently Amended) The device as claimed in claim 2, wherein ~~characterized in that~~ the reference potentials ~~(111)~~ of the two generators ~~(14 and 119)~~ are connected to the ground of the device.

4. (Currently Amended) The device as claimed in claim 2, wherein ~~either of claims 2 and 3, characterized in that~~ the space with no electric field includes ~~(15, 110, 114) comprises~~

enclosures (~~16, 1111 and 1115~~) that are raised to the reference potential (~~1114~~) of the two generators (~~14 and 119~~).

5. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ it includes an electrode (~~118~~) placed between the specimen support and the rest of the device, this electrode being able to be raised to any potential.

6. (Currently Amended) The device as claimed in claim 5, wherein ~~characterized in that~~ this electrode (~~118~~) is a perforated plate, which can be cooled.

7. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ the space with no electric field (~~15, 110, 114~~) contains means (~~113~~) for measuring the intensity of the beam current.

8. (Currently Amended) The device as claimed in claim 7, wherein ~~characterized in that~~ the means (~~113~~) for measuring the intensity of the beam current are associated with electron beam deflection means (~~112~~), these deflection means allowing the beam to be directed onto the means for measuring the electron current.

9. (Currently Amended) The device as claimed in claim 8, wherein ~~characterized in that~~ the deflection means (~~112~~) are activated by a rapid electronic system, allowing the measurement to be performed by sampling, during analysis.

10. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ the spectral analysis means (~~1113~~) comprise at least one WDS spectrometer.

11. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ it includes an object chamber (~~1112~~) placed in a high-dry

vacuum.

12. (Currently Amended) The device as claimed in claim 11, wherein ~~characterized in that~~ the object chamber (1112) includes a microleak.

13. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ it includes optical means for displaying the object analyzed.

14. (Currently Amended) The device as claimed in claim 12, wherein ~~characterized in that~~ the optical means include at least one catadioptric optic (1114) placed near the object, a pierced deflection mirror (1115) and an external optical system (1116).

15. (Currently Amended) The device as claimed in claim 1, wherein ~~any one of the preceding claims, characterized in that~~ it includes an electronic command and acquisition interface (41) connected to the various elements of the device, allowing remote control of the device and acquisition of the data corresponding to the measurements carried out.

16. (Currently Amended) The device as claimed in claim 15, wherein ~~characterized in that~~ it includes a computer (42) connected to the electronic interface (41) and equipped with a man-machine interface for remotely controlling the various elements of the device and for automatically exploiting the measurements made.

17. (New) The device as claimed in claim 3, wherein the space with no electric field includes enclosures that are raised to the reference potential of the two generators.

18. (New) The device as claimed in claim 2, wherein the space with no electric field contains means for measuring the intensity of the beam current.

19. (New) The device as claimed in claim 2, wherein the spectral analysis means

comprise at least one WDS spectrometer.

20. (New) The device as claimed in claim 2, wherein it includes an electronic command and acquisition interface connected to the various elements of the device, allowing remote control of the device and acquisition of the data corresponding to the measurements carried out.